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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/823,892      | 03/31/2001  | Jochen Kappel        | 051207-1010         | 7564             |

22827 7590 07/28/2005

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| EXAMINER |
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LAO, SUE X

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| ART UNIT | PAPER NUMBER |
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2194

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/823,892

Applicant(s)

KAPPEL ET AL.

Examiner

Sue Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 2-20 are presented for examination. This action is in response to the amendment filed 5/12/2005. Applicant has amended claims 3, 11 and 16.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 2-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The language of independent claims 3, 6, 11 and 16 raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a useful, concrete and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Independent claims 3, 6, 11 and 16 do not appear to require any computer hardware to implement the claimed invention. These claims appear to define the metes and bounds of an invention comprised of software alone. There is no support (i.e., explicitly claimed computer hardware) in the body of the claims. The systems of claims 3 and 16 appear to be a system comprised entirely of software. Software alone, without a machine, is incapable of transforming any physical subject matter by chemical, electrical, or mechanical acts. If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. In re Schrader, 22 F.3d 290 at 294-95, 30 USPQ2d 1455 at 1458-59 (Fed. Cir. 1994). Transformation of data by a machine constitutes statutory subject matter if the claimed invention as a whole

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accomplishes a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d 1368, 1373, 47 USPQ2d 1596 at 1600-02 (Fed. Cir. 1998). MPEP 2106. State Street required transformation of data by a machine before it applied the "useful, concrete, and tangible test." However, State Street does not hold that a "useful, concrete and tangible result" alone, without a machine, is sufficient for statutory subject matter. State Street, 149 F.3d at 1373, 47 USPQ2d at 1601.

Claims 2-20 are rejected under 35 U.S.C. 101 because the claimed invention, appearing to be comprised of software alone without claiming associated computer hardware required for execution.

5. Claims 2-5, 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al (US Pat. 5,375,234) in view of Tate (US Pat. 5,463,769) and Cramsie et al (US Pat. 5,448,726).

As to claim 3, Davidson teaches a system for providing dynamic definition (update data dictionary to reflect changes to objects) of an application object (objects, col. 1, lines 20-24), comprising:

means for providing an application dictionary (data dictionary) that contain information (information) about the application object (col. 1, lines 9-40);

means for modifying the application dictionary (update the data dictionary) to modify a definition (col. 1, lines 9-40) of the application object (reflect changes to objects). See col. 4, lines 21-52; col. 6, lines 29-37.

Davidson does not teach object-oriented system implementation, means for providing a class dictionary entry that defines meta information about the application object, nor means for validating the application dictionary modification.

Tate teaches object-oriented implementation of dictionary management (abstract, lines 7-8), including means for providing a class dictionary entry (mode dictionary entry for each class, col. 4, lines 31-32) to define the meta information about an application object (dictionary of class method dictionaries). See col. 2, line 50 – col. 3, line 1; col. 4, line 48 – col. 5, line 11.

Given the teaching of Tate, it would have been obvious to implement the dictionary management of Davidson with an object-oriented system and to include means for providing a class dictionary entry that defines meta information about the application object of Davidson. One of ordinary skill in the art would have been motivated to combine the teachings of Davidson and Tate because this would have provided a dictionary data structure which simplifies the change of mode of operations (Tate, col. 2, lines 38-40; col. 5, lines 24-34) which is desirable in Davidson (multiple modes supported such as create, delete, etc, col. 4, lines 21-32).

Regarding means for validating the application dictionary modification, Cramsie teaches dictionary management, including means for validating dictionary modification (validation process, verify data model's accuracy). See col. 4, lines 8-34; col. 4, line 63 – col. 5, line 25; col. 6, line 65 – col. 7, line 24; col. 8, line 18 – col. 9, line 3.

Therefore, it would have been obvious to include means for validating into Davidson as modified. One of ordinary skill in the art would have been motivated to combine the teachings of Cramsie and Davidson as modified because this would have provided a dictionary data structure which accommodates growth and is easily available (Cramsie, col. 9, line 50 – col. 10, line 3).

As to the amended component framework environment, it is met by Davidson as modified which provides a component framework environment (Tate, object-oriented environment) with client objects and server objects (Tate, source objects, target objects, col. 1, lines 39-54). Further, the amended a plurality of application dictionaries, one application dictionary for each client component and each server component, this would have been an obvious choice in that the dictionary is a data structure comprising sections each having information concerning one of the multiple objects (Davidson, col. 1, lines 9-40). Designating such sections of the dictionary as separate dictionaries / sub dictionaries would have been an obvious choice in data structure management.

As to claim 2, Davidson teaches means for determining the default location of the application object (origin, col. 1, lines 11-14).

As to claim 4, Davidson teaches means for saving the modified definition of the application object (update data dictionary to reflect changes to objects) (discussion of

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claim 1). Note discussion of claim 3 for validating the application dictionary modification.

As to claim 5, Davidson as modified teaches (Tate) means for defining a list of allowable attributes (list of supported methods) to be changed (add/delete, col. 4, line 48 – col. 5, line 11).

As to claims 11, it is basically a program product claim of claim 1 except for logic for providing a range definition. Davidson as modified teaches (Cramsie) logic for providing a range definition (value range) for each modifiable application object definition that specifies minimum [min of zero would have been an obvious choice in view of the fact that an object represents a student's course number] and maximum values (<100) for the definition. See col. 6, line 28 – col. 7, line 24. Note discussion of claim 3 for a motivation to combine. Davidson as modified further teaches (Tate) component pertinent information allowing a component to communicate with other components (connection between objects, col. 1, lines 49-54). It is noted that objects communicate via method invocations. Therefore, it would have been obvious to include such component pertinent information into other object information compiled in the data dictionaries.

As to claims 12-15, these are program product claims of claims 2-5, respectively, thus note claims 2-5 for discussions.

As to claims 16, it is basically a system claim of claim 3 and note the equivalence of modifier / means for modifying. Claim 3 does not cover a range enumeration definition. Davidson as modified teaches (Cramsie) a range enumeration definition (range definition) defining a comprehensive list of allowable attribute values for each application object definition (not greater than 100, numeric values only). See col. 6, line 28 – col. 7, line 24. note discussion of claim 1 for a motivation to combine. Note discussion of claim 11 for component pertinent information allowing a component to communicate with other components.

As to claims 17-20, these are system claims of claims 2-5, respectively, thus note claims 2-5 for discussions. Further note the equivalence of validation mechanism /

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means for validating regarding claim 18, and save mechanism / means for saving regarding claim 19.

6. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al (US Pat. 5,375,234) in view of Tate (US Pat. 5,463,769) and Fujii et al (US Pat. 6,032,198).

As to claim 6, it is basically a method claim of claim 1 except for component framework environment, one application dictionary for each client and server.

Fujii teaches using application dictionaries (interface dictionary 110, data item dictionary 111) in a component framework environment (client-server applications conforming to CORBA/DCOM architectures), wherein teach client/server component (application, program) is provided with its application dictionary (interface dictionary 110, data item dictionary 111 stored in repository 109) which is updatable. See col. 1, lines 16-39; col. 2, lines 17-59; col. 4, lines 10-19; col. 6, lines 27-61; col. 7, line 1 – col. 8, lines 6.

Given the teaching of Fujii, it would have been obvious to include a component framework environment into Davidson as modified and provide an application dictionary for each of the client and server components. One of ordinary skill in the art would have been motivated to combine the teachings of Davidson as modified with Fujii because this would have provided a dictionary can be updated/modified using a more user friendly interface (fig.s 17, 18, col. 10, lines 21-31).

As to claims 7-10, these are method claims of claims 2-5, respectively, thus note claims 2-5 for discussions.

7. Applicant's arguments filed 5/12/2005 have been considered but are moot in view of the new ground(s) of rejection.

As to the amended component framework environment, it is met by Davidson as modified which provides a component framework environment (Tate, object-oriented environment) with client objects and server objects (Tate, source objects, target objects, col. 1, lines 39-54).

As to the amended a plurality of application dictionaries, one application dictionary for each client component and each server component, this would be an obvious choice in that the dictionary is a data structure comprising (logical) sections each having information concerning one of the multiple objects (Davidson, col. 1, lines 9-40). Designating such sections of the dictionary as separate dictionaries / sub dictionaries would have been an obvious choice in data structure management.

As to the amended component pertinent information allowing a component to communicate with other components, Davidson as modified further teaches component pertinent information allowing a component to communicate with other components (Tate, connection between objects, col. 1, lines 49-54). It is noted that in an object-oriented environment, objects communicate via method invocations. Therefore, it would have been obvious to include such component pertinent information into other object information compiled in the data dictionaries.

Regarding the argued a list of used foreign components and their names, binding to foreign components and acquiring a link to the factory in the external components (remarks, page 5, last paragraph), while these features might have been disclosed, they are not brought out by the claim language. Therefore, the arguments are not persuasive. If applicant regards such features as defining over prior art, they need to be clearly brought out in the claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (571) 272-3764. A voice mail service is also available at this number. The examiner's supervisor, SPE Meng-Ai An, can be reached on (571) 272 3756. The examiner can normally be reached on Monday - Friday, from 9AM to 5PM. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 22, 2005



**SUE LAO**  
**PRIMARY EXAMINER**